

ABSTRACT

A micro-electro-mechanical generator is provided with a housing having a heat source and a heat sink opposite to the heat source in the housing. An upper diaphragm and a lower diaphragm separated from the upper diaphragm by a constant distance are further provided, which are deformable between a first position where the lower diaphragm is thermally connected to the heat source while the upper diaphragm being thermally shut off from the heat sink, and a second position where the upper diaphragm is thermally connected to the heat sink while the lower diaphragm being thermally shut off from the heat source. Further, the upper diaphragm and the lower diaphragm are adapted to generate electric energy whenever being deformed. A fluid chamber charged with working fluid is further provided, which has an upper end defined by the upper diaphragm, a lower end defined by the lower diaphragm and a lateral wall formed between the upper end and the lower end and having a configuration causing that a volume of the fluid chamber in the second position is larger than that of the fluid chamber in the first position.